APPENDIX A

Page 5, the paragraph beginning with the words "FIG. 2 is an exemplary…":

FIG. 2 is an exemplary signal model with adaptive LMS equalization. The exemplary signal model is used to represent transmitted symbols y(k) modulated by a carrier propagating though a dispersive communications channel c(t) 120 corrupted by AWGN (Additive White Gaussian Noise) n(t). The receiver 130 is modeled with a sampler 202 followed by a linear filter [204] <u>240</u>, such as an FIR (Finite Impulse Response) filter H(f). The signal is sampled at a rate T_s which can be different from the symbol rate T. The filter 240 provides soft estimates $\hat{y}(k)$ of the transmitted symbols y(k). The transmitted symbols may include a pilot sequence and a data sequence. During the pilot sequence of the transmission, the linear filter [204] <u>240</u> adapts its coefficients by means of an unconstrained LMS algorithm. During the data sequence of the transmission, the receiver generates hard symbol estimates from the soft symbol estimates.

Page 8, the paragraph beginning with the words "By inspecting equation (5)…":

By inspecting equation (5), one can see that the last term in equation (5) is the same as the denominator in equation (3). Accordingly, equation (3) can be rewritten as

TP format

$$\frac{\hat{C}}{I} = \frac{\alpha_{re}^2 \left\{ \frac{1}{N} \sum_{k=1}^{N} \left\| y(k) \right\|^2 \right\}}{\hat{MSE} - (1-\alpha_{re})^2 \cdot \frac{1}{N} \sum_{k=1}^{N} \left\{ \left\| y(k) \right\|^2 \right\}}$$

(6)

Attorney Docket No.: 010168
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Where the first term in the denominator is the MSE estimate defined in equation (4) and N represents the number of pilot symbols. The final step is to replace the bias α_{re} in equation (6) with the estimated bias α_{re} derived in equation (2) as follows:

(7)

$$\frac{\hat{C}}{I} = \frac{\hat{\alpha}_{re}^{2}\left\{\frac{1}{N}\sum_{k=1}^{N}\|y(k)\|^{2}\right\} \quad [15]}{\widehat{MSE} - (1-\hat{\alpha}_{re})^{2}\cdot\frac{1}{N}\sum_{k=1}^{N}\left\{\|y(k)\|^{2}\right\}}$$

Page 12, the paragraph beginning with the words "In addition to generating...":

In addition to generating the DRC message, the controller 432 can be used to support data and message transmissions on the reverse link. Specifically, the controller 432 provides synchronization and timing between a data source 433, an encoder 434 and a modulator 436. The controller [732] <u>432</u> can be implemented in a microcontroller, a microprocessor, a digital signal processing (DSP) chip, an ASIC programmed to perform the function described herein, or any other implementation known in the art.

Page 13, the paragraph beginning with the words "The data source 733 provides...":

The data source [733] <u>433</u> provides data to the encoder 434 for reverse link transmission from the subscriber station 302 to the base station 306. The encoder 434 generates and appends to the data a set of CRC bits, and a set of code tail bits. The encoder 434 encodes and interleaves the data and the appended bits. The interleaved data is provided to a modulator 436.

Page 16, the paragraph beginning with the words "The estimated the C/I...":

The estimated [the] C/I from the parameter generator 716 can be provided to a DRC generator 718 for generating the DRC message. In the described exemplary embodiment, the data rates supported by the base station 306 (see FIG. 4) are predetermined and each supported data rate is assigned a unique DRC message. The DRC generator selects one of the DRC messages based on the C/I estimate using any conventional approach known in the art such as a look-up table. An exemplary look-up table is shown below and identified as Table 1. The precise implementation of the DRC generator [714] <u>718</u> can take on various forms including, by way of example, an algorithm implemented in hardware, firmware or software, or a look-up table stored in memory such as an EEPROM or RAM.